



## **Fluoride in Drinking Water --Frequently Asked Questions**

### **What is fluoride?**

Fluoride is a naturally occurring mineral that is present in most water supplies, even rainwater, to some extent.

### **Why is fluoride in the District's water supplies?**

Fluoride occurs naturally in the groundwater aquifers located in northern Williamson County and Bell County. These aquifers are currently the sole source of drinking water for Sonterra Municipal Utility District (the District), as well as a number of other water systems in the region. The District does not add fluoride to its drinking water.

**Who regulates fluoride in drinking water and why?** The United States Environmental Protection Agency (EPA) has established limits for fluoride concentrations in public drinking water. The Texas Commission on Environmental Quality (TCEQ) is responsible for monitoring and enforcing the EPA regulations that apply to public drinking water systems in the State of Texas.

The EPA has stated that "Some people who drink water containing fluoride in the excess of the Maximum Contaminant Level (MCL) over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums" (*emphasis supplied*). The EPA has established a MCL for fluoride in drinking water of 4.0 mg/L to address the identified health risks and a secondary MCL for fluoride in drinking water of 2.0 mg/L to address the cosmetic dental risks. The TCEQ has advised the District that, when the EPA establishes a MCL, it is based upon people drinking two liters (about half a gallon) of water daily for seventy years (approximately one lifetime and that MCLs are set at levels that are expected to protect susceptible groups in our population, for example, children, pregnant women, the elderly, and people who may have existing health problems.

### **Is the District required by the TCEQ to provide an alternative source of water?**

As stated in the form of notice promulgated by the TCEQ, this is not an emergency. The TCEQ has specifically confirmed that the District is not required to provide an alternative source of water.

### **Why are the fluoride levels in the District's water supply above the MCL?**

The District's existing drinking water wells were approved by the TCEQ for public water service with naturally occurring fluoride concentrations of approximately 3.5 to 3.8 mg/L. Although near the MCL,

these fluoride levels are consistent with those found in water from other public water supply wells in the area. The fluoride levels in the District 's water supply were consistent with these original concentrations until the summer of 2016, when regular sampling conducted by the TCEQ determined that water from the District's water system contained a fluoride concentration above the MCL.

After receiving this sampling information from the TCEQ, the District authorized additional water sampling at each of its water supply wells in order to identify the source of the increased fluoride levels. Sampling in January 2017 established that water from the District's easternmost Edwards Aquifer well (Well No. 1) contained an elevated fluoride concentration of 4.7 mg/L, while water from the District's other two wells have maintained their fluoride concentrations of approximately 3.8 mg/L. Additional sampling of water from other new Edwards Aquifer wells located south and east of the City of Jarrell indicates that fluoride levels in this area of the Edwards Aquifer are generally elevated.

**What is the District doing to reduce the levels of fluoride in the drinking water immediately?**

1. In March 2017, the District stopped all regular pumping from Well No. 1. Well No. 1 has remained offline except during the recent Stage 4 water supply emergency.
2. At the Board's June 19 meeting, the Board voted not to provide water with a fluoride level of greater than 4.0 MC/L, even if the District was required to go to an increased drought management stage in order to avoid doing so, unless approved by a Board subcommittee consisting of Directors Slowbe and McCloskey in response to an emergency situation. Please note that it is anticipated that this will require continued implementation of Stage 2 or higher water use restrictions until an acceptable additional or new water supply is available.
3. The District is also proceeding with drilling a new well into the deeper Trinity Aquifer. Water from the Trinity Aquifer is anticipated to contain lower fluoride levels of between 2.0 mg/L and 3.0 mg/L which can be blended with water from the District's existing wells to reduce the system fluoride levels. The Trinity well is anticipated to be complete in early 2018.

**What is the District's long-term plan to reduce the levels of fluoride in the drinking water?**

1. In 2011, the District led a regional effort to form the Lone Star Regional Water Authority (LSRWA) to finance and develop a long term regional water supply for northern Williamson County.
2. In 2015, the District contracted with the LSRWA to obtain a surface water supply from the Brazos River Authority's surface water treatment plant located on Lake Granger. The District is participating with the LSRWA to construct a pipeline, which is expected to be completed in 2019, to deliver surface water from Lake Granger to the District. This surface water supply and pipeline will provide a long term solution to the water supply and water quality concerns presented by the local Edwards Aquifer water supply wells.